

# Simulation of *Dictyostelium Discoideum* Slugs Movement with Kilobots

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## Abstract

Understanding the collective behaviours in nature and its potential links to engineering the collective artificial behaviours in swarm robotics have attracted the attention among researchers. They have various impacts on different domains such as cell-biology, cancer study, swarm of drones and unmanned robots. Since the cancer cells share similar collective behaviours, the biomedicine researchers look into different examples from nature to design anti-cancer drugs to shrink tumours in human bodies. An interesting form of collective system is demonstrated by *Dictyostelium discoideum*.

*Keywords:* *Dictyostelium discoideum* - Kilobots - Swarm robotics - Multi-agent systems - Self-organising systems

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## 1 Problem